



Letters to the Editor

Hand decontamination by medical staff in general medical wards

Sir,

Increased media coverage of healthcare-associated infections (HAI) and the advent of clinical governance has placed greater emphasis on hand hygiene and education. It is over 150 years since Semmelweis first deduced that an 'unknown agent' transferred from doctors to patients was responsible for puerperal fever.¹ He reduced mortality in childbirth from 11% to below 1% in his hospital by enforcing a strict regime of handwashing.² Since then, much evidence has accumulated proving the efficacy of hand decontamination.³ Hands are now recognized as the principal route by which cross-infection occurs.⁴ Hand decontamination has been shown to reduce morbidity and mortality more than many other expensive interventions.⁵

Hand hygiene is poor in hospital staff. There are numerous papers describing how health professionals fail to decontaminate hands as thoroughly or as frequently as they should.⁶ On average, health workers have been found to decontaminate hands after only 29% of patient contacts.⁶ In the intensive care unit (ICU) setting, staff decontaminate hands half as often as they should and physicians have been noted to be the worst offenders.

We decided to audit the hand decontamination practices amongst physicians in the medical firms in our hospital during day-to-day ward rounds.

Four house officers on different medical teams monitored, over a two-week period, whether the other doctors in the team decontaminated their hands after examining patients during morning ward rounds. The other members of the team were not aware of the monitoring. Although the house officers did not receive specific training in hand decontamination, such an activity was deemed to be adequate if washing occurred with soap or alcohol hand-rub. Examination was classed as any type of direct contact with patients.

An audit of the facilities available for hand decontamination during the monitored ward rounds was also performed. The housekeeper who re-

stocks the facilities was not aware of the monitoring.

During a two-week period, 17 ward rounds by the four medical teams were monitored. Seven of the ward rounds were led by consultants, three by registrars and seven by senior house officers (SHOs). Hands were decontaminated after patient contact on 31% of occasions.

The seven consultant-led ward rounds resulted in hand decontamination on 62% of occasions. The three registrar-led ward rounds resulted in hand decontamination on 24% of occasions, whilst the SHO-led ward rounds resulted in hand decontamination following 13% of patient contacts (Figure 1).

During the 17 ward rounds, the sink was found to be in working order 100% of the time. However, soap was available on 82% of occasions, paper towels on 73% and alcohol hand-rub on 78% of occasions.

The results of our study are very similar to studies that have looked at frequency of hand decontamination by healthcare professionals. The average of 31% is comparable to the 29% achieved by nurses in 1994,^{1,3} and the 30% achieved by ICU staff in 1981.^{1,4} The behaviour of doctors with respect to hand decontamination does not appear to have changed over the last 20 years.

HAI is a clinical governance issue and the threat that HAIs may result in medicolegal action has been pointed out previously.⁷ Patients in hospital are susceptible to infection and 8% of hospital inpatients suffer an HAI. The cost of treatment is 2.8 times more than that of an uninfected patient, with average length of hospital stay 11 days longer. In England alone, £1 billion is spent on HAI with a human cost of 5000 lives per year. More needs to be done to reduce the threat of HAI and the simple measure of hand decontamination has been shown to be extremely effective.

Interestingly, the more senior members of the teams decontaminated their hands more frequently. Perhaps a sign of their experience of the high mortality and morbidity associated with HAI or maybe a 'habit' that has developed with the cumulative amount of time spent on the ward. Consultants are more involved with the issues of clinical governance and are accountable for their

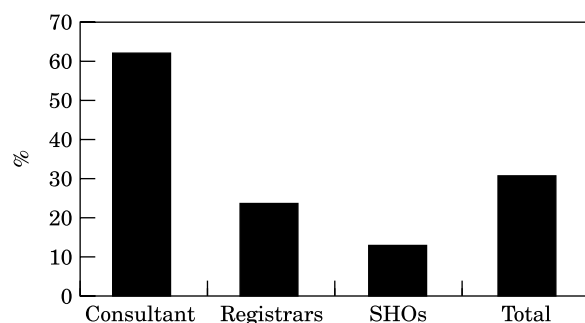


Figure 1 Percentage of doctors decontaminating hands after patient contact according to grade of doctor.

patients. They usually deal with problems encountered with patient care and this experience is likely to influence their behaviour. Consultants can influence their team by example and at the same time make a point of hand decontamination if any member of the team were to examine patients during their ward rounds. However, this method of influencing practice is limited as patient contact by junior staff occurs mostly away from the supervision of their consultant. In making junior members more accountable, it is possible that their behaviour can be changed.

In this hospital, figures for HAI, particularly methicillin-resistant *Staphylococcus aureus* (MRSA) and *Clostridium difficile*, are published monthly for each ward but usually only the Management is aware of them. The medical teams in this hospital are ward-based which means that they can feel responsible for the HAIs affecting their patients. Regular meetings with ward and medical staff, dedicated to clinical governance, will make them more aware of the problem and their responsibility to reduce the frequency of these infections. Patients with HAI can be studied to determine the possible route of infection and means by which it could have been prevented.

There are numerous reasons why doctors do not wash their hands, such as heavy workload, forgetfulness and dislike of harsh soaps and antiseptics.^{3,6} Convenience is of major importance; if adequate facilities are available and easy to reach, staff are more likely to use them. Alcohol hand-rub is convenient; it can be dispensed at the bedside and is less damaging to the skin.⁸ Nurses with access to hand-rub decontaminate their hands more often than those without.⁹ However, we found that facilities to decontaminate hands were not always available at the ward bays. This is obviously counterproductive to good hand-hygiene promotion. Again, such an issue can be highlighted in

regular dedicated clinical governance meetings of ward staff.

We have found it useful to ask one member of the team to be responsible for reminding everyone to wash their hands, and also to carry hand-rub around on the notes trolley. A study in Oxford has also found it useful to ask the patients themselves to remind their doctors of the need to wash hands. This study, however, reported that patients were at times embarrassed to ask if a doctor had washed their hands.

This study demonstrates how medical staff continue to be poor at hand decontamination. Medical staff need to be convinced of the importance of performing this simple duty.

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